

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of separating multivalent ions and lactate ions from a fermentation broth comprising a multivalent ion lactate salt by using an electrodialysis or electrolysis apparatus, ~~comprising the steps of the method comprising:~~  
introducing the broth into a first compartment,  
~~wherein the said broth having a multivalent ion concentration is of~~ at least 0.1 mole/l, ~~the~~  
said broth having a lactate ion concentration is of less than 300 g/l, ~~and~~  
said broth including negatively charged ion that is not lactate ion in an  
amount of less than 10 mole% of the based on a total amount of lactate ion in said broth, and  
~~are other negatively charged ions, into a first compartment of the electrodialysis or electrolysis apparatus, which~~  
said first compartment is being limited by an anion-selective or non-selective membrane and a cathode, and wherein ~~cathode;~~  
converting the multivalent ion is converted to obtain a residual stream  
comprising the a hydroxide of the multivalent ion, and ion;  
transporting the lactate ion is transported through the anion-selective or non-selective membrane into a second compartment,  
said second compartment being limited by the anion-selective or non-selective membrane and an anode, after which ~~anode; and~~  
neutralizing the lactate ion is neutralized to lactic acid.

2. (Currently Amended) The method according to claim 1 wherein the broth contains per equivalent of lactate ion at least 0.1 equivalent of the multivalent ion, ~~and preferably at least 0.3 equivalents of the multivalent ion.~~
3. (Previously Presented) The method according to claim 1 wherein the multivalent ion concentration in the broth is 0.1 – 1.5 mole/l.
4. (Previously Presented) The method according to claim 1 wherein the multivalent ion is a multivalent metal ion selected from magnesium, calcium, zinc, iron, aluminum, and mixtures thereof.
5. (Previously Presented) The method according to claim 1 wherein the fermentation broth comprises microorganisms.
6. (Previously Presented) The method according to claim 1 wherein the residual stream is recycled to the fermentation broth.
7. (Original) The method according to claim 6 wherein the hydroxide of the multivalent ion is at least partially present as solid in slurry.
8. (Previously Presented) The method according to claim 1 wherein the lactic acid is recycled to the first compartment.
9. (Currently Amended) The method according to claim 1 wherein the anion-selective or non-selective membrane is an anion-selective membrane.
10. (Previously Presented) The method according to claim 1 wherein a second membrane is used within the first compartment being an anion-selective membrane, a non-selective membrane, or a bipolar membrane having its cation-selective side directed to the cathode.
11. (Previously Presented) The method according to claim 1 wherein within the first compartment alternating anion-selective or non-selective membranes and bipolar membranes are used having their cation-selective sides directed to the cathode.

12. (Currently Amended) An electrodialysis or electrolysis apparatus for separating a fermentation broth into a residual stream comprising multivalent ions and lactate ions, comprising a first compartment which is limited by an anion-selective or non-selective membrane, ~~preferably an anion-selective membrane~~, and a cathode, which further comprises means for introducing the fermentation broth, and a second compartment limited by the anion-selective or non-selective membrane and an anode, which further comprises means for removing lactic acid, and optionally means to recycle the residual stream to the fermentation broth.

13. (Original) The electrodialysis or electrolysis apparatus of claim 12 wherein the first compartment further comprises a second membrane being an anion-selective membrane, a non-selective membrane, or a bipolar membrane having its cation-selective side directed to the cathode.

14. (Previously Presented) The electrodialysis or electrolysis apparatus of claim 12 wherein the first compartment comprises alternating anion-selective or non-selective membranes and bipolar membranes having their cation-selective sides directed to the cathode.

15. (New) The method according to claim 1, wherein the broth contains per equivalent of lactate ion at least 0.3 equivalents of the multivalent ion.

16. (New) The electrodialysis or electrolysis apparatus of claim 12, wherein said anion-selective or non-selective membrane is an anion-selective membrane.